

REMARKS/ARGUMENTS

In the Office Action mailed August 10, 2009, claims 1 – 12 were rejected. In response, Applicants have added new claim 17 and canceled claims 13 – 16. Applicants hereby request reconsideration of the application in view of the added claim and the below-provided remarks.

Claim Rejections under 35 U.S.C. 103

Claims 1 – 12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Roz (U.S. Pat. No. 6,462,647) in view of Arakawa et al. (U.S. Pat. No. 7,283,810, hereinafter Arakawa). However, Applicants respectfully submit that these claims are patentable over Roz in view of Arakawa for the reasons provided below.

Claim 1

Claim 1 recites:

“A data carrier for contactless communication with a base station by means of an electromagnetic field generated by the base station, having an antenna coil connected to a first coil terminal and to a second coil terminal, in which antenna coil an antenna signal can be induced in operation by the electromagnetic field, and having modulation means for modulating the electromagnetic field, during successive load periods and off-load periods, with transmission data to be communicated to the base station, the electromagnetic field being load-modulated during the load periods by modifying the value of the impedance of a modulation load that is connected at least indirectly to the first coil terminal and the second coil terminal, and having detection means for detecting an item of energy information that characterizes the energy content of the antenna signal, and having comparator means for comparing the item of energy information detected with a preset item of energy information and for emitting an item of comparison information and having modification means for modifying the ratio of the duration of the load period to the duration of the succeeding off-load period as a function of the item of comparison information.” (emphasis added)

The Office action cites Roz as teaching all of the limitations of claim 1 except that “Roz does not expressly disclose having a modification means for modifying the ratio of the duration of the load period (TB) to the duration of the succeeding off-load period (TE) as a function of the item of comparison information (VI).” The Office action then

states that “Arakawa et al. teach modifying duty ratio in defining power source for saving power consumption (column 37 line 26 to column 38 line 44), which would have obviously suited for the data carrier of Roz in the event of defining power source by comparator means.” The Office action then concludes that it would have been obvious “to incorporate changing duty ratio based on defined power source taught by Arakawa et al. into the data carrier of Roz, in order to save power consumption.”

Applicants assert that a *prima facie* case of obviousness has not been established because the combination of Roz and Arakawa fails to teach every limitation of claim 1. In particular, Applicants assert that Arakawa fails to teach “modification means for modifying the ratio of the duration of the load period to the duration of the succeeding off-load period as a function of the item of comparison information” as recited in claim 1.

Arakawa teaches that the duty ratio D can be “changed in conformance to the battery 63 terminal voltage or engine operation time” (col. 38, lines 36 – 38) or “changed in accordance with the location information of a mobile network machine 31,” (col. 38, lines 42 – 44). However, Arakawa does not teach changing the duty ratio D “as a function of the item of comparison information,” where the comparison information is a comparison of an item of energy information that characterizes the energy content of an antenna signal with a preset item of energy information. That is, neither a battery voltage, an engine operation time, nor location information represents a comparison of an item of energy information that characterizes the energy content of an antenna signal with a preset item of energy information. While Arakawa teaches changing a duty ratio as a function of a battery voltage, an engine operation time, or location information, Arakawa is silent on changing the duty ratio D “as a function of the item of comparison information,” where the comparison information is a comparison of an item of energy information that characterizes the energy content of an antenna signal with a preset item of energy information. Because Arakawa is silent on changing the duty ratio D “as a function of the item of comparison information,” where the comparison information is a comparison of an item of energy information that characterizes the energy content of an antenna signal with a preset item of energy information, Applicants assert that a *prima facie* case of obviousness has not been established.

Independent Claim 7

Independent claim 7 includes similar limitations to claim 1. Although the language of claim 7 differs from the language of claim 1 and the scope of claim 7 should be interpreted independently of claim 1, Applicants respectfully assert that the remarks provided above in regard to claim 1 apply also to claim 7.

Dependent Claims 2 – 6 and 8 – 12

Claims 2 – 6 depend from claim 1 and claims 8 – 12 depend from claim 7. Applicants respectfully assert that claims 2 – 6 and 8 – 12 are allowable at least based on allowable base claims. Additionally, each of claims 5, 6, 11, and 12 may be allowable for further reasons, as described below.

Claim 5 recites in part “wherein, to detect the energy content of the antenna signal, the detection means are designed to determine the coil voltage arising between the first and second coil terminals.” In the Office action, support for the rejection of claim 5 is based solely on “column 4 lines 26 – 44, detecting and converting signal energy.”

(Office action, page 5) At column 4, lines 26 – 44, Roz teaches:

“Storage means 40 are also preferably made by forming a capacitor including a terminal 400 connected to terminal 364 of processing means 36, and an earth terminal 401 connected to the earth of transponder 30, so that the voltage present across terminals 400 and 401 is equal to DC voltage V2. By way of illustration only, storage means 40 can contain an electric charge equivalent to a voltage of the order of 2 to 6 volts.

Processing means 36 include an earth terminal 362 connected to the earth of transponder 10, and a supply terminal 363 intended to receive a supply voltage V1 supplied by accumulator 38.

Accumulator 38 is arranged so as to be able to supply voltage V1, this latter having to be sufficient to supply electrically all the components of transponder 30. For this purpose, accumulator 38 includes a supply terminal 380 for supply voltage V1, and an earth terminal 381 connected to the earth of transponder 30. Accumulator 38 is preferably made using a conventional accumulator.” (emphasis added)

Although Roz teaches a supply terminal (363), to receive a supply voltage V1 supplied by accumulator (38), see Fig. 3, Applicants assert that Roz does not teach detection means designed “to determine the coil voltage arising between the first and second coil terminals” as recited in claim 5. Because Roz does not teach detection means designed “to determine the coil voltage arising between the first and second coil

terminals." Applicants assert that a *prima facie* case of obviousness has not been established with respect to claim 5.

The above-provided remarks apply also to claim 11.

Claim 6 recites in part "wherein, to detect the energy content of the antenna signal, the detecting means are designed to determine a bleed current through a regulator stage." In the Office action, support for the rejection of claim 6 is based solely on "column 4 lines 26 – 33." (Office action, page 5) At column 4, lines 26 – 33, Roz teaches:

"Storage means 40 are also preferably made by forming a capacitor including a terminal 400 connected to terminal 364 of processing means 36, and an earth terminal 401 connected to the earth of transponder 30, so that the voltage present across terminals 400 and 401 is equal to DC voltage V2. By way of illustration only, storage means 40 can contain an electric charge equivalent to a voltage of the order of 2 to 6 volts." (emphasis added)

Although Roz described the storage means (40), see Fig. 3, Roz does not teach a detection means that is designed "to determine a bleed current through a regulator stage" as recited in claim 6. In particular, Roz makes no mention of a bleed current or a regulator stage. Because Roz does not teach a detection means that is designed "to determine a bleed current through a regulator stage." Applicants assert that a *prima facie* case of obviousness has not been established with respect to claim 6.

The above-provided remarks apply also to claim 12.

New Claim 17

New claim 17 is dependent on claim 1 and recites in part "wherein the modification means outputs an item of ratio information, which indicates the ratio of the load period to the off-load period, to the modulator means." Support for new claim 17 is found in Applicants' specification at, for example, paragraph [0046] (U.S. Pub. No. 2007/0149161 A1). Applicants respectfully assert that claim 17 is not taught or suggested by Roz in view of Arakawa.

CONCLUSION

Applicants respectfully request reconsideration of the claims in view of the amendments and the remarks made herein. A notice of allowance is earnestly solicited.

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-4019** pursuant to 37 C.F.R. 1.25. Additionally, please charge any fees to Deposit Account **50-4019** under 37 C.F.R. 1.16, 1.17, 1.19, 1.20 and 1.21.

Respectfully submitted,

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